

REMARKS

Responsive to the outstanding Office Action, applicant has carefully studied the Examiner's rejections. Favorable reconsideration of the application in light of the amendments and arguments is respectfully requested.

The claims pending in the application are claims 1, 3-9, and 13-24. In the response, claims 1, 4 and 16 have been amended, claims 2 and 10-12 have been canceled and claims 17-24 have been newly presented. It is respectfully submitted that no new matter has been introduced in these amendments. As four claims have been canceled there are now 20 total claims, it is therefore submitted that no claim fees are due.

**RESPONSE TO ELECTION/RESTRICTION REQUIREMENT**

Applicants hereby confirm the oral election of May 11, 2006. As claims 10-12 are drawn to a non-elected species, these claims have been canceled herein.

**OBJECTIONS TO THE SPECIFICATION**

The Examiner objected to paragraphs [0004], [0014] and [0015] for containing errors. Paragraph 4 incorrectly referred to patent 5,939,210 and has been amended to correctly refer to patent 5,939,201. The Examiner also observed that paragraphs [0014] and [0015] referred to concentration of nitrogen, and indicated that they should refer to concentration of ammonia. Upon review, applicant agrees with the Examiner that a clerical error was made referring to concentration of nitrogen instead of ammonia. Paragraphs [0014] and [0015] have thus been corrected herein.

In view of the above corrections, withdrawal of the Examiner's objections against the specification is hereby respectfully requested.

**REJECTIONS UNDER 35 USC §102 and 103**

In the Office Action, the Examiner rejects claims 1, 3, 6-8, 14 and 16 under 35 USC §102(b), as being anticipated by Dick et al (US 5,431,707). Claims 2, 4-5, 9, 13 and 15 have been rejected under 35 USC §103, as being unpatentable Dick et al. in view of Soubeyrand (US 5,798,142).

Claim 1 has been amended to indicate that the precursor mixture includes a radical scavenger which is not disclosed in the Dick et al reference (US 5,431,707), and which was mentioned in formerly pending claim 2. The Examiner has used the Soubeyrand reference (US 5,798,142) in conjunction with the Dick reference to indicate that this combination is obvious. Contrary to the assertion of the Examiner, it is respectfully submitted that this claim is not obvious in view of the applied prior art.

The Dick reference discloses a process for the formation of a silicon-base anti-migration layer on a hot surface of a glass object. The reference is particularly directed to the formation of glass receptacles (bottles) to prevent the migration of ions into liquids contained in the receptacles. The Dick reference indicates (column 1, lines 60-63) that the gaseous mixture is projected onto the ambient surface in an ambient atmosphere, typically free air.

While the Examiner indicates that there is a lack of inventive step in the combination of a radical scavenger, such as ethylene, with the present invention, applicants respectfully disagree with this position. The disclosure of the present invention show unexpected benefits from the addition of ethylene to the production process. Specifically, for example, the specification notes that the peak thickness is achieved with a lower percentage of NH<sub>3</sub> as the percentage of ethylene increases and that the biggest boost to coating thickness is when NH<sub>3</sub> is added to a gas stream containing a relatively low percentage of ethylene.

It is also noted that the present specification indicates that essentially no nitrogen is deposited in the barrier layer in accordance with the present invention. The reference cited by the Examiner makes no such exclusion, and, in fact, gives no reason for the exclusion of nitrogen from the barrier layer. As noted in the present invention, silica-oxy-nitride coatings yield properties, specifically refractive indices, which may not be useful for the glass products formed from the present invention. Control of these properties, by the exclusion of nitrogen, is an important feature of the present invention. The Dick reference makes no such teaching or suggestion regarding the deposited coating.

For the reasons above, claim 1, and the claims dependent therefrom, are believed to have both novelty and inventive step over the applied references.

With regard to claim 16, the Examiner indicated that this claim lacked novelty over the previously discussed Dick reference. Claim 16 has been amended to refer to the production of a barrier layer in an on-line float glass production process, which is not described in the Dick

reference. In fact, the formation of glass receptacles, as disclosed in the Dick reference, is inconsistent with the use of an on-line float glass production process, which produces sheets of glass. Further, the disclosure of the Dick reference indicates (column 1, lines 60-63) that the gaseous mixture is projected onto the ambient surface in an ambient atmosphere, typically free air. This differs from the on-line float glass production process claimed herein. It is respectfully submitted that it would be improper to amend the Dick reference to occur in an on-line float glass production process, as claimed in claim 16, as there is no indication in Dick to do so and further, to do so would be contrary to the teachings of the Dick reference. It is therefore submitted that amended claim 16 is novel over the Dick reference, as are the claims dependent therefrom.

Claims 3-9, 13-15 and 17-24, which depend, directly or indirectly from independent claims 1 or 16, are believed to be allowable based, at least, upon this dependence from what are believed to be allowable base claims. Therefore, all of the claims are believed to be allowable over the applied art of record.

In view of the above, it is submitted that all of the claims are in condition for allowance, and action towards that end is respectfully requested. Should the Examiner wish to modify the application in any way, applicant's attorney suggests a telephone interview in order to expedite the prosecution of the application.

Respectfully submitted,



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